AN

ESSAY

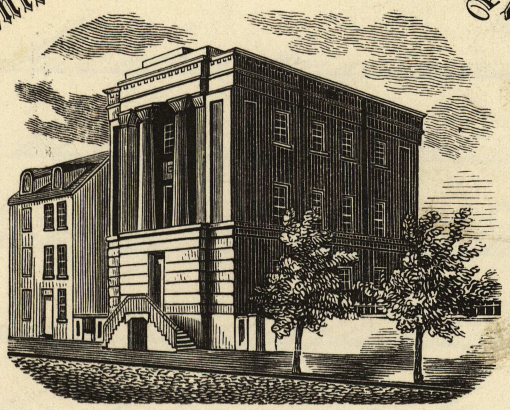
ON

DIPHTHERIA.

RESPECTFULLY SUBMITTED TO THE FACULTY

of the

Homœopathic Medical College of Pennsylvania,



FOR

The Degree of Doctor of Medicine

BY

Charles H. Chamberlin, Lyndon, Vt.

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Diphtheria.

This disease was first described, and called Diphtherite by M. Bretonneau of Tours, in 1826. It has been known as an epidemic disease for the last three centuries, although not recognized by this term. The terms that have been used at different periods to designate the disease are Malum Egyptiacum, Morbus Suffocans, Garrotillo, Angina Suffocativa, Gula Morbus, Epidemicus Strangulatorius, Ulcus Syriacus, Putrid Sore Throat, Sore Throat Distemper, Pseudo Membranous Pharyngitis, Black Tongue, and Diphtheritis of the nineteenth

century. According to writers, this disease prevailed in Holland in 1327, and 1557, also some parts of France in 1578; Andalusia and other parts of Spain in 1590 and 1591. It prevailed in Sicily, Italy, and Spain in the sixteenth and seventeenth centuries. It visited England, France, Holland, Sweden, Germany, and North America about the middle of the last century, and almost if not entirely disappeared until the first quarter of the present century. For the last few years it has prevailed epidemically in Great Britain and nearly all parts of the United States. Writers have divided the disease into several varieties

Dr Madden of England in the British
Journal of Homeopathy makes five division
Dr. Duke of Pittsburg classifies his cases
into six varieties. I think, as far as
my observation goes that there are three
distinct types of the affection, viz.
The Simple, Contagious and Malignant
In the simple form there are but few
prodromic symptoms, sometimes none
at all, but is usually preceded by a
slight malaise for a few days before
the throat becomes sore; Sometimes drow-
siness and chilliness, occasionally amount-
ing even to shivering, followed by febril
reaction. Sometimes pains in the limbs,

and head; and less frequently nausea and vomiting. More commonly the earliest complaint is of slight stiffness of the neck, soreness and a pricking sensation in the fauces. On examination the glands at the angles of the lower jaw are almost always found to be slightly swollen and tender to the touch. Internally, one or both tonsils are found to be swollen, and usually reddened and inflamed, but may be enlarged without being reddened to any great extent. The redness is of a rose colour in young children and of crimson or deep claret colour

in older children, and adults; the hue almost always varying with the intensity of the disease. The arches of the palate, the velum, uvula and sometimes the posterior wall of the pharynx participate more or less in the inflammatory action. Together with these symptoms, we have fever of a synochal type. Skin hot and dry, pulse somewhat accelerated, full hard and bounding; loss of appetite, bowels constipated, urine scanty, and high coloured.

All these symptoms may occur, and increase in severity as the

disease progresses without any diphtheritic exudation; but usually the peculiar exudation may be detected within twenty-four hours after the commencement of the disease. The membrane most frequently makes its appearance on the tonsils. Sometimes it is in very small patches not larger than a pins head, which increase in size, and finally coalesce, forming one large patch covering the whole tonsil. The membrane increases in circumference and in thickness, until the disease has reached its acme, when it is thrown off either in shreds, or small patches, or

else it comes away entire. The simple type usually reaches its acme in from four to eight days. In some cases the membrane may be thrown off about the fourth day, and the patient become convalescent, while in other cases the exudation extends into the pharynx, and posterior nares, and may extend into the mouth, even reaching the incisor teeth, covering the whole roof of the mouth. With the above symptoms the patient is seldom convalescent under eight or ten days. Some writers have described Diphtheria as having nearly the same symptoms as common catarrh with the exception of the exudation.

I consider what they call Diphtheria to be nothing more or less than diphtheritic sore-throat; which almost always prevails when Diphtheria is epidemic. When Diphtheria is epidemic, other diseases such as erysipelas, scarlatina, rubeola &c, may have this peculiar exudation; what can be more reasonable than to expect common catarrh should take on the diphtheritic. Physicians, who have had the good luck to see all cases of Diphtheria, and have loudly proclaimed it to the world, in all probability have been fortunate enough not to meet with one case of genuine Diphtheria.

In a genuine case of Diphtheria of the simple type at the commencement there is fever of a synochal type, which changes into the adynamic, in from 12. to 48 hours.—
The symptoms that characterize this change are great prostration of the whole system; accelerated, weak, thready, and intermittent pulse; laboured respiration, the surface of the body becomes cool, and the skin feels clammy to the touch. Stools of a dissoluie character, nausea and vomiting, epistaxis &c &c. When the disease is about to take a favorable turn, we have a refreshing slumber, a copious diaphoresis, a diminution of the swelling of the glands an arrest of the membranous deposit, and its

gradual disappearance, a slower pulse and returning appetite, and strength.

The Croupous Type.

In the croupous type we have nearly the same symptoms as in the simple form at the commencement of the disease, together with others of a more alarming character, which show that the larynx is invaded. The croupous variety generally supervenes those cases, which at the commencement assumed a mild type, usually that of follicular angina, or, in other cases invading the anterior, and posterior nares, and upper portion of the pharynx, exhibiting at the outset only the symptoms of ordinary catarrh. In other cases the disease locates itself

in the larynx at the very outset, and may not make its appearance upon the amygdale, or any part of the fauces during the whole course of the complaint. When the larynx is invaded the symptoms in addition to the simple type are. short, difficult and hoarse respiration, accompanied by a shrill harsh, rattling, or metalic sound; the cough is also of the same character. Sometimes this type is ushered in with the common symptoms of croup, and may be mistaken for that disease, although there is usually swelling of the tonsils and fauces beside other symptoms of a constitutional character, which do not accompany croup.

The breathing in Diphtheria is peculiar, particularly during sleep, and when once heard will never be forgotten although it is very hard to describe. It consists in a short moaning sound, which at times may be heard at a great distance. The eyes protrude, and seem as though they would burst from their sockets, while they become very brilliant. The face assumes a bluish, waxey appearance the voice becomes impaired; Sometimes there is complete aphonia. In all cases of this type the voice is more or less impaired, and in nearly all there is complete loss of voice for a longer or shorter period. In a large number of cases it is utterly impossible

for them to make a loud noise, for ten or twelve days. Such cases seldom regain their sound for weeks, and sometimes months.
In this form of the disease, when it is about to turn favorably, the membrane is thrown off, when respiration becomes more natural, the skin gradually turns to its normal colour, and there is a gradual return to health. On the other hand, if the disease is to terminate unfavorably, all the symptoms increase in severity. The breathing becomes more and more laboured, the patient gasps for breath, thrusts his hands into his mouth and grasps at the neck or clothing to endeavor to gain more air.

the blueness of the skin increases, and the horrid ghastliness of countenance until death finally closes the scene. In the croupous form death (or convalescence) generally ensues within 72 hours after the invasion of the larynx.

The Malignant Type.

In the malignant type of Diphtheria there are scarcely any prodromic symptoms. The disease is usually ushered in by severe almost unendurable pain in the head, back, limbs, stomach and bowels accompanied by vomiting and purging of fetid, bloody and depraved secretions. excessive prostration and utter

inability to retain anything upon the stomach. We may have all these symptoms before the appearance of the diphtheritic exudation, though the peculiar factor of the disease is as apparent as at any subsequent time. The factor of Diphtheria is peculiar to this disease alone and the physician who is acquainted with the disease cannot fail to form a correct diagnosis at the very onset by this sign alone. In many cases he is enabled to diagnose the disease on entering the sick room, and frequently even as soon as he enters the house. Very often the factor is of such a putrid

characters that the patient himself complains; and it is unendurable by the physician and attendants, so much so, that the stomach often relieves itself of its contents, almost instantaneously, regardless of position, or circumstances. Sometimes there is enormous swelling of the glands of the throat together with the adjacent tissues; at other times little or none. They are frequently swollen to such an extent as to render it impossible for the patient to get the mouth open far enough for the physician to examine it.

The tongue also is frequently so enlarged as to entirely fill the mouth, and in some instances cannot be retained within the mouth. In cases of this kind, we frequently have a rash, which resembles the rash of Scarlatina. Epistaxis is not of unfrequent occurrence, and in the last stages is of a persistant character seeming thereby to hasten the fatal issue. With the above symptoms there may, or may not be a considerable "wash leather deposit". The extent or amount of the exudation does not depend upon the severity of the disease,

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nor does the severity, or fatality, depend upon the exudation in all cases. In many cases that prove fatal the soonest there is but little swelling, or exudation. In the malignant form we have fever of a typhoid type at the very commencement; the pulse is weak, thready, intermittent, and very much accelerated. not unfrequently it is as high as 160 beats per minute. The jaundice prostration occurs at the very onset in nearly all cases, and sometimes it is so great as to render the patient as helpless as a child in a very few hours. In some cases of this type the

disease locates itself in the anterior, and posterior nares, and makes it seem as though the head was one mass of corruption. There is a constant discharge from the mouth and nose of a very offensive character. I remember some cases, in which the discharge amounted to a quart in twenty four hours, and continued for about ten days, or until the swelling had nearly all disappeared, and the patient become convalescent; in others the discharge would suddenly cease about the fifth day, and thereby appeared to hasten the fatal termination. In many cases where there was enormous swelling

of the throat, and a large quantity of false membrane; the swelling suddenly subsided; the membrane was all thrown off, and deglutition became nearly normal; the patient and all who were not conversant with this insidious form of the affection thought him to be past all danger, suddenly sank to death without a sigh or a groan, overwhelmed by the constitutional poison. Nearly all writers upon Diphtheria tell us that death is caused by the imperfect aeration of the blood. I think, (notwithstanding the opinion of others) as far as my observation goes, that death seldom takes

place by asphyxia: having seen several hundred cases of the very worst form of the disease, many in which it proved fatal, I never saw but one die from suffocation. Had I time and space, I could relate numerous cases to prove my assertions, but, as I must be brief, I will leave this part of the subject, and proceed to investigate the causes of the disease.

Causes.

The causes of Diphtheria may be considered as predisposing and exciting. Among the predisposing causes may be named erysipe

diet, over exertion of body or mind, dampness, poor ventilation, improper attention to cleanliness, exposure, and a scrofulous diathesis &c&c. The exciting cause probably in most cases is owing to an epidemic influence. Nearly all writers upon the subject, call it both an epidemic and endemic disease. M. Bretonneau thought it to be contagious, or that that the disease could not spread only by inoculation. That the disease can be produced by inoculation there is not a particle of doubt in my mind, notwithstanding the

opinion of others. Quite a number of cases have occured under my own observation. That go to prove this assertion. One was in a physician, who had a small wound upon his hand and while examining a patient's throat some of the exudation was thrown off, and came in contact with the wound; the result was inflammation of the hand and arm, extending to the shoulder, which immediately produced constitutional symptoms of a severe character. He was obliged to give up all business for sometime and came very near loosing his hand, and also his life.

This happened to an allopath while cauterizing the fauces and on the whole I think served him right. Another similar case came under my notice; a man (while washing some clothes that had been used about his children through their sickness in this disease) produced a small blister on one finger, which probably absorbed some of the poison, and immediately resulted in inflammation and the genuine diphtheritic exudation. The membrane formed, and was thrown off several times in succession. He lost the use of his hand for

some two or three months, and came near loosing his life. Many things might be brought to notice to prove the disease contagious, and of its being conveyed by fomites. Although the disease does not seem to be governed by fixed laws of incubation, together with the immunity of a second attack generally secured by diseases considered contagious, yet I believe the disease infectious; and to a greater or less extent contagious.

Diagnosis.

Diphtheria may be confounded with several diseases by the inexperienced

practitioner. The most common of these are, croup; Scarlatina and gangenous pharyngitis. In any one of these we do not have the peculiar factor, nor the presence of the false membrane, which characterizes Diphtheria. The rash in Diphtheria does not occur until about the second week and is not constant, nor does it come off in patches like Scarlatina. As far as I have observed, we have rash in about one tenth of the cases in Diphtheria, while in Scarlatina we always have rash. Pathology.

On account of the small number of post mortem examinations, the pathology

of Diphtheria is not fully established, but in nearly all cases that have been examined after death was found more or less inflammation of the tonsils, fauces, pharynx, larynx anterior and posterior nares, with the pseudo membranous deposit. This is found in the heart, bronchia, brain, and in all the mucous surfaces of the body; the chief points of deposit however, are found to be, first the tonsils, then the mucous membrane is it is reflected upon the epiglottis from the base of the tongue, the palate, velum, pharynx &c.

The membrane varies in colour from white, grey, to ash or dark almost black.

The composition of the Membrane. I have but little to say upon this point as it is a mooted question. Some writers considers it to be entirely albuminous while others think it is fibrinous and a third class believe it to be of a parasitic origin. I think however from numerous experiments that have been made, that it is albuminous. This is verified by its coagulation on the application

of heat; also. by the albuminous precipitate when treated with nitric acid, &c.

Prognosis.

In the prognosis of the disease no direct rules can be laid down In some localities nearly all recover while in others it is just the reverse. In the simple form the prognosis is favorable, but in the congeous, and malignant types it is very unfavorable. The simple form may run into the congeous which will render it unfavorable In the malignant type death may

occur in a very few hours, but does not usually under a week or ten days. There are some symptoms that may always be regarded as unfavorable. Among these are: the invasion of the larynx and trachea. Exceeding high pulse, coldness, and blueness of the extremities and surfaces. Epistaxis, and dark appearance of the faeces: extensive discharges from the nostrils; vomiting and diarrhoea at an advanced stage of the complaint: intense albuminuria; passage of membrane from the bowels, convulsions, petechia, rigors, &c.

There are certain conditions attending the most unfavorable cases, which after considerable experience will enable the attendant to give a very correct prognosis in the case, even at the commencement, and furthermore will allow the Physician as he scans community to judge pretty correctly who, and what temperaments are most surely to be offered the "fell destroyer". As I have said before death may occur in the putrid type in from six to ten days, or after the severity of the disease has apparently passed, the patient may linger for

weeks and months, and at last succomb by reason of nervous exhaustion. Sequelae.

The sequelae of this disease may be named "Legion", for they are many. Among the most common of these are, Lash, rheumatism, epistaxis, strangury, coughs, glandular abscesses, otorrhoea, ozoena, erysipelas staphismus, impaired vision, dropsy, a peculiar nasal twang of voice, affection of the spinal marrow, paralysis, etc &c. Perhaps the most peculiar, and most frequently recurring sequelae is the great prostration of the nervous system.

Treatment of Diphtheria

This can be no better evidence of the intractability of a disease than the recommendation of a thousand "sure cures" or "specifics" Every old woman knows a "sure cure" for rheumatism, and, notwithstanding this disorder is still one of the most intractable of any that exist in the hands of scientific, and well read physicians. This is precisely the case with Diphtheria. Many articles have been thrust upon the public, and profession from time to time as specifics for this disease but as

yet no true specific has been found, nor do I believe there ever will. In the treatment of this disease we must first consider the origin or seat of the disease. Many allopath and some homeopaths believe this to be a local complaint, and of course treat the disease accordingly. I believe the disease to be constitutional If it is not, How can we account for the constitutional disturbance before there is any local difficulty? In many cases the local complaint does not make its appearance until the patient is past all cure. There is such

a change in the blood as to render it almost destitute of vitality. I have seen some cases wherein the very commencement, the blood would not coagulate in the least; and for this reason it must be conclusive evidence that it had lost one of its most important ingredients; the fibrin. This fact alone, in my mind, seems to prove that the membrane cannot be composed of fibrin, and furthermore shows the origin or seat of the disease to be in the blood, consequently the treatment should be constitutional

I think the experience of all scientific physicians in the treatment of this disease will coincide with these views. Nearly all, both allopaths and homœopaths, who have had but little experience in the treatment of the disease, direct their whole treatment entirely to the local affection this accounts for the great mortality when the disease first makes its appearance in any locality. As they become better acquainted with the complaint, this mode of treatment generally falls into disrepute. So far as curative agencies are concerned

topical applications are of no value; the cause remaining unabated the production of the false membrane will continue; additional inflammatory action will certainly supervene and the patient's sufferings will be increased, while the nervous system will be seriously affected by the excitement produced by the operations.

There may be instances, however when suffocation from the presence of the exudation within the fauces is imminent, and in order to gain time for the action of internal medicines, that topical

applications may be recommended. Many articles have been recommended by the profession, from time to time, as the very best for this purpose. These are the muriate of iron, and glycerine, sulph. acid ammonia, sulphate of copper or zinc, nitrate of silver, hydrochloric acid, Spirits of terpentine, tannin, iodine, tar, acetic, racemic, kali chlo. &c &c. I have seen some of these used, and on the whole think the muriate of iron the very best. In applying this we should have a camels hair

brush, which should be thoroughly saturated with the tincture and applied to the membrane, immediately the patient coughs, and in most instances the membrane is thrown off. This is merely a palliative, and does not have any curative effect whatever. Everything that could be thought of (by very wise old ladies) has been used as an external application to the throat; but the very best that ever has been used is water, cold or warm, - if to allay pain,

use it warm, but if to subdue local congestions and inflammations and the condition of the patient would allow it; use it cold. In some cases much benefit may be derived from the use of alcoholic stimulus, together with a generous diet; while in other cases, it only seems to increase the patients sufferings. The internal remedies, that have proved most beneficial in this disease, are Aeon. Bell. Arsenicum, Iodine. Bromine. The different preparations of Mercury, Cuprum. Capsicum. Cantharis. Belladonna.

Crotal, tig. Hepar, sul. Phos. Bry. Lachesis, Spongia. Castor eum. Ipecac. Antimonium crud, some of the acids we do. Some of these have been considered specifics, for instance, one says he has found Bryonia to cure all cases; another Lachesis, Bell. and Antimonium crud. and others. Bromine, and Arsenicum &c. As far as my observation goes, I do not believe that any one remedy will cure every case of Diphtheria, or any other disease. Physicians, who have cured all cases of this disease with the high attenuations by giving one dose

and allowing it to act twenty-four hours, before any change was made, probably have not had the worst forms of the disease to treat; if this were the case, they would not be under the necessity of making but one prescription, because, in all human probability, their patient would be a fit subject for the undertaker before twenty-four hours would elapse.

The remedies that are most serviceable in the first stage of the complaint are, Acon.

Bell. Capsicum. Kali, chlor.
Merc, bi'od. In the latter
stage. Bell. Merc, bi'od., Nitric. ac.
Mur. ac. Sulph. ac. Stibium. Rhus
tox, Phos. Arsenicum. China,
Carbo, veg. etc. In the
cerebral variety Aconite,
Hepar, sul. Iodine Kali, bi. Nux,
and Spongia, last.
I have seen many very
bad cases of the cerebral
type, which were entirely
controled by Aconite Hepar.
sul. and Spongia; indeed
I never saw a case of this type

Bell. Capsicum. Kali, chlor.
Merc, hy'od. In the latter
stage. Bell. Merc, hy'od., Nitric, ac.
Mur, ac. Sulph. ac. Stibium. Rhus
tox. Phos. Arsenicum. China
Carbo, veg. etc. In the
corrosive variety Aconite,
Hepar, sul. Iodine Kali, bichrom
and Spongia, last.
I have seen many very
bad cases of the corrosive
type, which were entirely
controlled by Aconite Hepar.
sul. and Spongia; indeed
I never ~~saw~~ a case of this type

that proved fatal, although
I have seen where the membrane
formed in the larynx,
trachea, and bronchial
tubes, and was thrown off
in a complete mould
of the whole air passages;
therefore I think nearly
all cases of this type may
recover if they have proper
treatment. There is one
direct rule [if lived up to]
that will cure all cases
that are curable; and
this is to prescribe at

all times and under
all circumstances according
to the great, and only
law of cure
Similia Similibus Curantur
I believe every disease
that ever was, or ever
can be cured, must be in
accordance with this law, and
I believe the day will surely
come, when all physicians
will treat diseases according
to homoeopathic principles
"Ply swift-around ye wheels of time,
and bring the welcome day"